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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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022850 IM22/0920
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EXAMINER

SHOSHOLC

ART UNIT

PAPER NUMBER

1714

DATE MAILED:

09/20/01

8

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/582,216

Applicant(s)

Fickelsen et al.

Examiner

Calle Shosho

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— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Jun 29, 2001
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9-35 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirements.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- *See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 18) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____

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DETAILED ACTION

1. All rejections are overcome in light of applicants' amendment which cancels all original claims.

The new grounds of rejection as set forth below are necessitated by applicants amendment which sets forth all new claims, and thus, the following action is final.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 9-35 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 9 recites that the polymer has a "number average molecular weight, Mn, of a soluble fraction of less than 30,000". The scope of the claim is confusing because it is not clear what the polymer is soluble in. Page 4, line 17 of the present specification discloses "tetrahydrofuran-soluble fractions". It is suggested that applicants insert "tetrahydrofuran" before "soluble" in the above phrase.

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Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 9-35 are rejected under 35 U.S.C. 102(b) as being anticipated by CA 2,182,743.

CA 2,182,743 discloses an aqueous composition free of organic solvents having boiling point less than 260° C at 1 bar wherein the composition comprises 20-90% polymer having glass transition temperature less than -25° C and 1-80% filler. It is disclosed that the polymer is obtained from 60-100%, preferably 80-100%, and particularly preferably, 90-99.8% C₁-C₂₀ alkyl (meth)acrylate and further is obtained from 0-40% monomer such as hydroxyalkyl (meth)acrylate and (meth)acrylamide. It is further disclosed that the polymer has gel content of 0-90%. The filler includes chalk which has mean particle diameter of 3-50 µm and/or quartz powder which has mean particle diameter of 3-50 µm. The aqueous composition also comprises wetting agent or dispersant. There is also disclosed a method wherein the above composition is used as a floor adhesive for floor covering such as textile binding, polyolefin covering linoleum covering, etc. wherein the composition is applied to floor covering and then installing the floor covering. There is also disclosed a method wherein the above composition is applied to substrate such as wood,

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ceramic tile, and metal surface (page 1, line 40-page 2, line 2, page 2, lines 9-26, page 3, lines 1-13 and 28-29, page 4, lines 42-46, page 5, lines 1-16 and 30-42, and example 2A).

Although there is no explicit disclosure of the number average molecular weight of the soluble fraction of the polymer, given that the polymer is identical to that presently claimed and possesses the same gel content as presently claimed and further given that the same type of polymerization process is "particularly preferred" in both the instant application (see page 4, lines 38-40) and CA 2,182,743 (see page 3, lines 39-41), it is clear that the number average molecular weight of the soluble fraction would inherently be the same as presently claimed.

In light of the above, it is clear that CA 2,182,743 anticipates the present claims.

Claim Rejections - 35 USC § 103

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. Claims 9-14 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawashima et al. (U.S. 4,972,000) in view of CA 2,182,743.

Kawashima et al. disclose an aqueous solvent-free coating composition comprising polymer with THF-insolubles, i.e. gel content, of 20-90% and number average molecular weight of the THF-soluble fractions of 700-20,000 wherein the polymer comprises 0.5-100% alkyl (meth)acrylate such as methyl (meth)acrylate, ethyl (meth)acrylate, and butyl (meth)acrylate. The

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polymer is present in the form of an aqueous dispersion with solids content of 10-65%. The composition also comprises filler. It is further disclosed that the composition is used as an adhesive, which clearly encompasses flooring adhesives, which coats substrates. It is calculated that the composition contains, for instance, 12.5% (100/800) polymer and 87.5% (700/800) filler based on the amount of filler and polymer present in the composition (col.5, lines 4-5, col.6, lines 55-56 and 59-62, col.17, lines 20-22, 31-32, and 47-54, col.20, lines 11-14, 37, and 57-65, col.22, lines 6-11 and 40, and col.38, line 47).

The difference between Kawashima et al. and the present claimed invention is the requirement in the claims of (a) specific type of filler and (b) glass transition temperature of the polymer.

With respect to difference (a), CA 2,182,743, which is drawn to aqueous coating composition, disclose the use of filler such as chalk which has mean particle diameter of 3-50 μm and/or quartz powder which has mean particle diameter of 3-50 μm in order to produce a composition with good wet and dry grab and good heat distortion resistance (page 1, lines 30-32 and page 4, lines 42-46).

In light of the above, it therefore would have been obvious to one of ordinary skill in the art to use such filler in the composition of Kawashima et al. in order to produce a composition with good wet and dry grab and good heat distortion resistance, and thereby arrive at the claimed invention.

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With respect to difference (b), there is no explicit disclosure of the glass transition temperature of the polymer in Kawashima et al. However, it would have been within the skill level of one of ordinary skill in the art to recognize that the glass transition temperature of the polymer is controlled by varying the type and amount of monomer used to obtain the polymer. Further, one of ordinary skill in the art would have recognized that by controlling the glass transition temperature of the polymer, the polymer properties such as water resistance, tackiness, dispersability, etc are controlled.

Thus, it would have been obvious to one of ordinary skill in the art, absent evidence to the contrary, to control the glass transition temperature of the polymer to values, including those presently claimed, in order to produce a polymer with suitable water resistance, dispersability, tackiness, etc., and thereby arrive at the claimed invention.

8. Claims 9-10, 12-17, 21, 26-27, 29, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuruoka et al. (U.S. 5,637,644).

Tsuruoka et al. disclose an aqueous coating composition, free of solvent, comprising polymer with gel content of 10-98% wherein the polymer comprises 33-79.5% C₁-C₄ alkyl (meth)acrylate. The polymer may also be obtained from other monomers such as hydroxyalkyl (meth)acrylate and (meth)acrylamide. The composition also comprises filler such as calcium carbonate, i.e. chalk, which has average particle diameter of less than 5 μm. It is disclosed that the composition further comprises dispersant. It is further disclosed that the composition is used

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as a flooring adhesive as well as a coating for substrate such as cement and metal (col.2, lines 15-17, col.3, lines 40-45 and 53, col.4, lines 4-10, col.9, lines 16-21, col.10, lines 20-25, 37-38, and 55, col.11, lines 36-39, col.11, line 61-col.12, line 21, col.12, lines 28-30, and col.14, lines 19-25). It is calculated that the aqueous composition contains, for instance, 50 (100/200)-87.5% (700/800) filler and 12.5-50% polymer based on the amount of filler and polymer present (col.11, lines 61-65). Although there is no disclosure of the number average molecular weight of the soluble fraction of the polymer, given that the polymer is the same as presently claimed and possesses the same gel content as presently claimed, it is clear that the number average molecular weight of the soluble fraction of the polymer would intrinsically be the same as presently claimed.

While Tsuruoka et al. fail to exemplify the presently claimed composition nor can the composition be "clearly envisaged" from Tsuruoka et al. as required to meet the standard of anticipation (cf. MPEP 2131.03), nevertheless, in light of the overlap between the claimed composition and that disclosed by Tsuruoka et al. and absent evidence to the contrary, it is urged that it is obvious that it would have been within the bounds of routine experimentation, as well as within the skill level of one of ordinary skill in the art, to use a composition which is both disclosed by Tsuruoka et al. and encompassed within the scope of the present claims, and thereby arrive at the claimed invention.

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Response to arguments

9. Applicants' arguments with respect to Columbus et al. (U.S. 4,225,496), Schwerzel et al. (U.S. 5,196,468), Lofgren et al. (U.S. 4,654,388), and Su (U.S. 6,124,417) have been considered and are moot in view of the discontinuation of these references as applied against the present claims.

10. Applicant's arguments filed 6/29/01 have been fully considered but, with the exception of arguments relating to the Columbus et al., Schwerzel et al., Lofgren et al., and Su references, they are not persuasive.

Specifically, the applicant argues that neither Kawashima et al. or Tsuruoka et al. disclose filler as presently claimed.

With respect to Kawashima et al., it is agreed that there is no explicit disclosure of the presently claimed fillers, which is why Kawashima et al. is now used in combination with CA 2,182,743.

With respect to Tsuruoka et al., it is noted that col.10, line 55 and col.11, lines 36-39 disclose the use of calcium carbonate, i.e. chalk, which has average particle diameter of less than 5 μm , and thus Tsuruoka et al. do disclose the filler as presently claimed.

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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EP 792926 disclose an aqueous composition comprising polymer with glass transition temperature less than 25° C and filler, however, there is no disclosure of specific filler or specific polymer which has gel content or number average molecular weight of soluble fraction as presently claimed.

JP 63270872 disclose a composition comprising polymer which has gel content of 30-90% and filler, however, there is no disclosure that the composition is aqueous or of specific filler or specific polymer which has number average molecular weight of soluble fraction as presently claimed.

JP 07173798 disclose composition comprising polymer which has certain gel content, however, there is no disclosure that the composition is aqueous or of specific filler that the polymer which has number average molecular weight of soluble fraction as presently claimed.

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Callie Shosho whose telephone number is (703) 305-0208. The examiner can normally be reached on Mondays-Thursdays from 7:00 am to 4:30 pm. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan, can be reached on (703) 306-2777. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-3599.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Callie Shosho

9/17/01

Vasu Jagannathan
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